



## **CORRUGATED ALUMINUM ALLOY CULVERT PIPE FIELD SECTION 1024**

**1024.1 Scope.** To establish procedures for the inspection of corrugated aluminum alloy sheets intended for use in culvert pipe and the inspection of fabricated aluminum alloy pipe.

### **1024.2 Apparatus.**

- (a) Micrometer or vernier caliper capable of measuring to 0.0001 in. [0.00254 mm] and accurate to within at least 0.001 in [0.0254 mm].
- (b) Rule with suitable graduations to accurately measure the material to be inspected.
- (c) Balance or scale accurate to within 0.5 percent of the weight [mass] of the sample to be weighed.

**1024.3 Procedure.** The requirements for this type of culvert are covered in Specification Sec 1024, Sec 725, and AASHTO M196. A manufacturer's certified analysis and guarantee is required to be filed with the Division Engineer, Materials, prior to the acceptance of any corrugated aluminum alloy sheets or fabricated aluminum alloy culvert pipe. Those manufacturers listed in Table 1 of this Section have filed a certified analysis and guarantee for the alloy shown. Sheets from other manufacturers or of a different alloy are not to be accepted. In addition to filing an acceptable certified analysis and guarantee, the manufacturer is required to furnish a certification showing typical chemical and physical test results representative of the type of material furnished for each lot or shipment offered. The pipe fabricator is to endorse the manufacturer's certification attesting that the certification applies to the pipe furnished. Field inspection of the corrugated sheets, before fabrication of culvert pipe, is to include an examination of identification markings; testing for field thickness in the same manner as described in Field Sec 1020 of this Manual; measuring dimensions of corrugations; and determining weight [mass] per square foot [meter] of the sheets. Field inspection of fabricated culvert pipe is to include an examination of identification markings and checking for conformance to diameter, length, and workmanship. Unless field inspection indicates questionable compliance, samples are not required for Laboratory testing. The sampling frequency for field testing or Laboratory testing shall be as shown for corrugated galvanized steel culvert sheet, [Field Sec 1020, Table 1](#) of this Manual. Samples submitted to the Laboratory shall be cut full width of the sheet and be a minimum of 18 in. [450 mm] in length. If samples are submitted to the Laboratory, SiteManage is to be used. The inspector is to show all information contained in the identification markings on the sheets and indicate the tests for which the samples are being submitted. The manufacturer's certification shall be retained in the district office.



## **1024.4 Report.**

**1024.4.1** Inspection reports of fabricated aluminum alloy culvert pipe shall be made through SiteManager. The report is to indicate acceptance or rejection. If the report indicates acceptance, the basis of acceptance of the metal shall be stated in the body of the report as follows:

"Based on the approved brand, the attached certification, and an examination of the material, we believe the material conforms the requirements of the specifications. Fabrication is satisfactory. Material accepted."

If the report indicates rejection, the reasons for rejection shall be detailed in the body of the report.

Distribution of reports for materials purchased under a Department purchase order is to be as described in [Field Sec 2001](#) of this Manual.

